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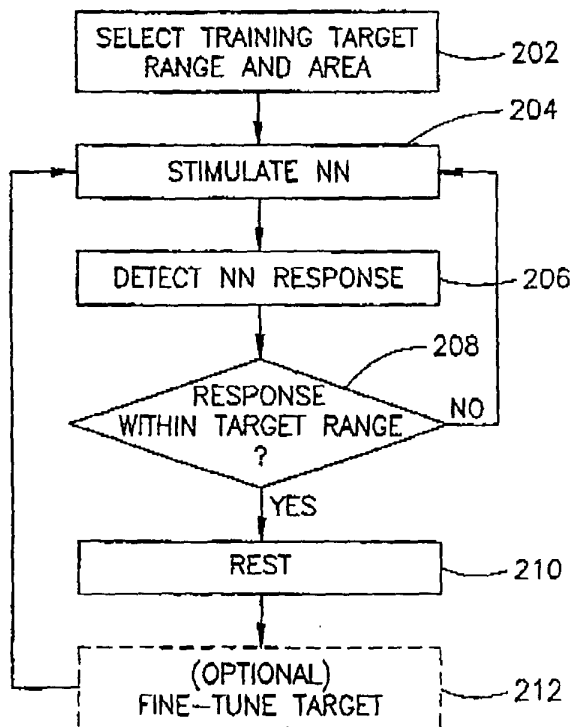
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[Continued on next page]

(54) Title: CEREBRAL PROGRAMMING



(57) Abstract: A method of training a biological neural network using a controller includes the steps of applying a cycle comprising stimulating a neural network using the controller by applying at least an input signal to the network (204), detecting an output response of the network by the controller (206), modifying the stimulation of the neural network for at least a period of time if the response matches a desired at least approximate response (208), and repeating the cycle of stimulation, detection, and modification at least one more time (212) until the neural network is trained to generate a desired output response for said input signal.

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# INTERNATIONAL SEARCH REPORT

International application No.

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 5/00  
US CL : 600/554; 607/48; 128/925

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 600/554; 607/48; 128/925

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST

Search terms: neural network, electrical stimulation, training

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,396,896 A (TUMBY et al) 14 March 1995 (14.03.1995), col.6, line 40 thru col.7, line 59.	1,6,7,9,11,14,15,24
A	US 5,325,862 A (LEWIS et al) 05 July 1994 (05.07.1994), all	1, 68,83,100
A	US 6,171,239 B1 (HUMPHREY) 09 January 2001 (09.01.2001), Fig.12, col.13, lines 15-55.	1,68,83

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
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